[illegible]

Nº 1046
125ptas

EXAMEN Nº 1
ASSIGNATURA: ANGLES I
IDENTIFICACIO DE LA PROVA: 340 731 10
CURS: 1992-93
CONVOCATORIA: Examen final 17 de Juny (93)
DURADA DE L'EXAMEN: 2 hores i 15 minuts
PUNTUACIO: 50 Respostes correctes d'un total de 80. Les incorrectes no descompten.

I. Choose the right alternative. Only one is correct.

1.- The decimal *15.023* can be read as:
a) fifteen point oh-twenty-three
[✓ b)] fifteen point oh-two-three
c) fifteen comma zero-twenty-three
d) fifteen comma nought-two-three

2.- How long is that container? It has A LENGTH OF 6m.
a) 6 m long
b) a ~~long~~ LENGTH of 6 m
[✓ c)] a length of 6 m
d) 6 m in length

IT IS 6m LONG.
IT HAS A LENGHT OF 6m.
THE LENGHT OF X IS 6m
OF X IS MESURED IN M.
IT IS 6m IN LENGHT
IT IS 6m IN LENGTH

3.- One of these is not correct. Which one?
[✓ a)] That antenna is X in shape. IT IS + ADJ + IN SHAPE
b) That antenna is X-shaped.
c) That antenna is shaped like an X.
d) That antenna has the same shape as the letter X.
THAT ANTENNA IS SHAPED LIKE THE LETTER X.

4.- That printer is TOO HEAVY FOR ME to carry.
a) too ~~much~~ heavy for me
b) too ~~many~~ heavy for me
ADJ.
c) enough heavy for me
HEAVY ENOUGH FOR ME
[✓ d)] too heavy for me

TOO + ADJ + FOR NOUN / VERB (TO)

5.- [✓ a)] My PC is good enough to do what I need to do.
b) My PC is enough good to do what I need to do.
c) My PC is enough good for word-processing.
d) My PC is good enough for ~~do~~ what I need to do.

ADJ + ENOUGH + VERB
TO + V.INF.

6.- One of these is not correct. Which one?
There aren't ______________ in this school.
a) enough classrooms
[✓ b)] big classrooms enough
c) enough big classrooms
d) big enough classrooms

ENOUGH + NOUN
ENOUGH + ADJ
ADJ + ENOUGH

7.- ______________ electrical equipment with hands.
a) You don't touch never
b) Don't touch never
[✓ c)] Never touch INF.
d) Don't never touch

NEVER + VERB + PHRASE

8.- One of these does not mean the same as "*First, switch off the main supply, then remove the fuses*". Which one?
a) After switching off the main supply, remove the fuses.
b) Before removing the fuses, switch off the main supply.
c) Having switched off the main supply, remove the fuses.
[✓ d)] Once you have removed the fuses, switch off the main supply.
PRESENT PERFECT

AFTER / BEFORE + V.ING
ONCE - PAST PERFECT
ADVERB OF INDEFINITE TIME.

9.- The petroleum that comes OUT OF cannot really be used for anything.
[✓ a)] out of
b) of
c) to
d) into

10.- The first flight _____ ACROSS _____ the Atlantic was made in 1919.
a) round b) on c) through [✓ d) across]

11.- It is not very difficult to turn a liquid ______________ a gas.
a) in [✓ b) into] c) on d) to

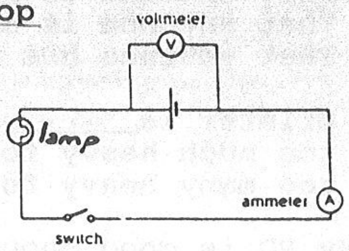
12.- The system METEOSAT is a geostationary satellite located 22,500 miles ______________ the Equator.
a) on b) over [✓ c) above] d) up

13.- If the temperature of oxygen falls ______________ -183° C, it changes its composition completely, from a colourless gas to a bluish liquid which is highly magnetic.
[✓ a) below] b) under c) into d) over

14.- When a material is transparent, it means you can see ______________ it.
a) across [✓ b) through] c) in d) into

15.- ______________ the materials that have a high resistance we have: asbestos, celluloid, porcelain, cotton and rubber.
a) With
b) In the middle
c) Between
[✓ d) Among]

16.- In this circuit diagram, the lamp is placed _____ ON THE LEFT, TOWARDS THE TOP. _____
[✓ a) on the left, towards the top]
b) ~~to~~ the left, ~~at~~ the top
c) on the left, ~~at~~ the top
d) to the left, upwards



17.- Hydraulics is a remarkably efficient way of _____ DISTRIBUTING _____ power evenly.
a) to distribute
b) distributed
[✓ c) distributing] TO BE + | | + OF + V.ING
d) distribute

GOOD - BETTER - BEST

18.- "COBOL is better for business than FORTRAN" means the same as:

BAD - WORSE - WORST

a) FORTRAN is worst for business than COBOL. → WORSE.
b) FORTRAN is less ~~bad~~ for business than COBOL. BETTER
c) FORTRAN isn't as good for business ~~than~~ COBOL.
[✓ d) FORTRAN isn't so good for business as COBOL.]

19.- People can usually learn BASIC _____ MUCH MORE QUICKLY THAN _____ other programming languages. ADV - QUICKLY
a) much quickly than
[✓ b) much more quickly than]
c) much quicker than
d) much quicklier than

20.- They _____ HARDLY EVER _____ get to the station in time to catch the train.
a) hard b) hardly [✓ c) hardly ever] d) harder

II. Read the text carefully and answer the questions below according to the table.

FERROUS METALS.

	MALLEABILITY	ELASTICITY	CARBON CONTENT (approx.)
wrought iron	good	good	0.05%
low carbon steels	quite good	quite good	0.08–0.25%
medium carbon steels	not very good	not very good	0.25–0.65%
high carbon steels	poor	poor	0.65–1.50%
cast iron	very poor	very poor	2%–5%

This is a table of ferrous metals. It compares their malleability with their carbon content. It also compares their elasticity with their carbon content.

NOUN

Cast iron is 21)____________ malleable of these metals. High carbon steels are not very malleable, either. However, with less carbon in them, steels become 22)____________. Medium carbon steels are more malleable than high carbon steels. Low carbon steels have even more malleability. Wrought iron is 23)____________________ of these ferrous metals.

Wrought iron is also the most elastic of these metals. Low carbon steels are less elastic because they have more carbon in them. Medium carbon steels are 24)____________________ low carbon steels. High carbon steels have even 25)__________ elasticity because they contain even more carbon. Cast iron has 26)________________in it. Therefore, it is 27)__________ ____________ elastic.

28)______________ these metals contain, ____________ ____________________ they are. Wrought iron contains 29)____________________ and it is the most elastic. Cast iron contains the most carbon and it has 30)____________________. The steels have a medium carbon content and medium elasticity.

21.- a) ~~the~~ more ___ THAN c) ~~the~~ less ___ THAN
b) the most ___ OF... IN... [✓ d)] the least ___ OF... IN...

22.- [✓ a)] more malleable c) ~~the~~ less malleable
b) ~~malleabler~~ d) ~~most~~ malleable

23.- a) the ~~more~~ malleable [✓ c)] the most malleable
b) the ~~less~~ malleable d) the least malleable

24.- a) more elastic than [✓ c)] less elastic than
b) more elastic ~~that~~ d) less elastic ~~as~~

? 25.- a) as much c) as many
[✓ b)] less d) little

IT HAS + 26.- a) the less carbon c) the least carbon
b) the more carbon [✓ d)] the most carbon

IT IS THE LEAST + ADJ. 27.- a) the better [✓ c)] the least
b) the more d) the best

? 28.- [✓ a)] the more carbon / the less malleable and elastic.
b) the more carbon / the least malleable and elastic.
c) the most carbon / the most malleable and elastic.
→ d) the most carbon / the least malleable and elastic.

29.- a) the most carbon c) as carbon
[✓ b)] the least carbon d) so much carbon as

IT HAS + 30.- a) the most elasticity [✓ c)] the least elasticity
b) the more elasticity d) the less elasticity

VOCABULARY:

PART I.

10.-	flight:	vuelo
12.-	located:	situado
13.-	bluish:	azulado
17.-	evenly:	equitativamente

PART II.

wrought iron:	hierro colad
cast iron:	hierro fundi
Therefore:	Por lo tanto

III. Choose the right alternative. Only one is correct.

31.- This microscope focuses MORE CLEARLY THAN that one.
a) more clear than
[✓ b)] more clearly than
+ ADV +
c) more clearly + THAN
d) clear~~lier~~ than

32.- [✓ a)] BASIC is the most frequently used programming language
b) BASIC is the programming language ~~more~~ frequently used
c) BASIC is the least frequent used programming language.
d) BASIC is the programming language more frequent used.

33.- Electrical Engineering has three times ______________ Mechanical Engineering in other colleges.
STUDENTS – COUNTABLE
LITTLE / MUCH – UNCONTABLE
a) as ~~much~~ students as
b) as few~~er~~ students as
[✓ c)] as many students as
d) as little students as

34.- Optical fibres have many advantages over conventional cables; for example, with conventional cable you can transmit ______________ telephone calls than with optical fibre.
a) many less
b) many fewer
c) much less
[✓ d)] much fewer

35.- Another advantage is that you hear ______________ crosstalk when using optical fibre.
a) many less
b) many fewer
[✓ c)] much less
d) much fewer

36.- Optical fibre doesn't have SO LITTLE capacity as conventional cable.
NEGATIVE ;
SO/AS + ___ + AS
UNCONTABLE
a) as few
[✓ b)] so little
c) as many
d) as fe~~wer~~

37.- ______________ are used for radio broadcasting.
BOTH ... AND ...
NEITHER ... NOR ...
[✓ a)] Both low frequency and medium frequency bands
b) Both low frequency ~~nor~~ medium frequency bands
c) Neither low frequency ~~and~~ medium frequency bands
d) Neither low frequency ~~either~~ medium frequency bands

38.- ______________ the advantages of floppy disks, they can be damaged easily.
DESPITE + NOUN / VERB -ING
a) Although
b) Even though
[✓ c)] Despite
d) In spite OF

39.- Oersted and Faraday carried out different experiments. Oersted showed that a wire carrying an electric current acts like a magnet, ______________ Faraday showed that magnets could be used to produce an electric current.
a) . however, ...
[✓ b)] ..., whereas ... / WHILE
c) despite
d) in comparison with

40.- Which of these expressions is correct and shows contrast?
a) to be in contrast ~~to~~ WITH
b) to be opposed ~~with~~ TO
c) to be different ~~to~~ FROM
[✓ d)] to be unlike

41.- Since 1965, satellites ___HAVE BECOME___ increasingly important for long distance communications.
[✓ a) have become] - PRESENT PERFECT
b) became
c) had become
d) have became

42.- In 1948, the invention of the transistor at Bell Telephone Laboratories ___LED___ to a revolution in Electronics and to the creation of semi-electronic telephone exchanges.
a) have led
b) had led
[✓ c) led] — PAST SIMPLE
d) has led

43.- Has the field of Telecommunications made great progress in the last twenty years? Yes, ___IT HAS___.
a) it did
[✓ b) it has]
c) it has made
d) they have made

44.- That scientist ________________ experiments on corrosion in metals.

PRESENT PERFECT

a) has~~n't~~ already made
[✓ b) still hasn't made]
c) just hasn't made
d) hasn't made ~~yet~~

45.- a) He has read that book on Electrical Engeering yet.
b) He has still read that book on Electrical Engineering.
c) He already + has read that book on Electrical E.
[✓ d) He has just finished reading that book on E. E.]

PRESENT PERFECT.

JUST — PRESENT PERFECT

46.- The low cost of producing silicon chips ________________ electronic technology into our everyday life.
[✓ a) has brought]
b) have brought
c) brought
d) had brought

47.- The engine ______________ after it ________________ all the reliability tests.
a) broken down / has completed
b) had broken down / had been completed
[✓ c) broke down / had completed] PAST SIMPLE / PAST CONTINUOS
d) had broken down / completed

48.- ____________ the investigator had discovered his mistake, he made the necessary corrections to his data.
[✓ a) As soon as] - PAST PERFECT
b) Before
c) Long before
d) After that

49.- They knew that there were three planes because they ___HAD SEEN___ the reflections on the radar screen.
a) have been seen
b) have seen
c) had saw
[✓ d) had seen] BECAUSE + PAST PERFECT

50.- A new experiment about the effects of ultra-high speeds ________________ while I was working at the University Laboratory.
a) was been tested
b) is been tested
[✓ c) was being tested]
d) were testing

51.- Atoms ______________________ or changed in any way by chemical reactions.
a) cannot being destroyed
[✓ b)] cannot be destroyed
CAN BE + (PAST PARTICIPLE)
c) cannot been destroy
d) cannot to be detroyed

52.- The impersonal form of *"We have made great progress on the use of solar energy for heating purposes"* is:
[✓ a)] Great progress has been made on the use of solar energy for heating purposes.
b) Great progress was made on the use of solar energy for heating purposes.
c) Great progress on the use of solar energy for heating purposes we have been made.
d) On the use of solar energy for heating purposes has been made great progress by us.

53.- The mechanism of that machine ______________________ before switching it on.
[✓ a)] should be checked
b) should have checked
SHOULD BE + PAST PARTICIPLE
c) should check
d) should being checked

54.- New techniques ______________________ the Research Department.
a) are been discovered by
[✓ b)] have been discovered by
c) discovered
d) ~~is~~ ARE being discovered by

55.- The sentence *"The trasmission of the signal was at a different frequency from yesterday's"* means:
a) The frequency of the signal was transmitted yesterday. ONLY?
[✓ b)] The signal was transmitted at a different frequency from yesterday's.
c) Yesterday we transmitted the frequency of the signal. ??
d) The signal of the transmission was received at a different frequency from yesterday's. ??

56.- The impersonal form of *"We cannot prove that there is life after death"* is:
a) It cannot being proved that there is life after death
CAN BE + P.P. + THAT / TO
b) It cannot to be proved that there is life after death
c) It cannot been proved that there is life after death
[✓ d)] It cannot be proved that there is life after death
CAN BE + (PAST PARCIPLE = V.+ED)

57.- Life after death ______________________.
a) cannot been proved to exist
b) cannot to be proved that to exist
[✓ c)] cannot be proved + to exist
d) cannot be proved that exist
V. INF.

58.- *"You cannot reduce friction by using this material"* means:
CANNOT = IS IMPOSSIBLE TO
[✓ a)] It is impossible to reduce friction....
b) It is unnecessary to reduce friction....
c) It is disadvantageous to reduce friction....
d) It is useless to reduce friction....

59.- The pistons move as soon as ______________________.
a) energy will be released
[✓ b)] energy is released ??
c) releases the energy
d) energy will released

AS SOON AS + PAST SIMPLE

71.- a) cannot being destroyed c) cannot been destroyed
[✓ b) cannot be destroyed] d) cannot to be destroyed
CAN BE + PAST PART.

72.- "*in order to*" in line 10 could be substituted by:
a) so that b) for [✓ c) so as to] d) while
IN ORDER TO = SO AS TO

73.- a) to be able to c) will can to
b) are capable of [✓ d) are able to]
IMP + IN ORDER TO / SO AS TO + V. INF

74.- "*their*" in line 13 refers to:
a) properties c) microscopes
b) instruments [✓ d) atoms]

75.- [✓ a) as easily as] c) as easy as
b) as easily than d) so easy that

76.- "*it*" in line 16 refers to:
a) atom [✓ c) any piece of material]
b) quantity d) each kind of atom

77.- a) while c) whereas
b) although [✓ d) even though]

78.- a) could to be said c) could been said
[✓ b) could be said] d) could being said

79.- a) has already been drunk
b) have been already drank
c) have been drank already
[✓ d) have already been drunk] → POSITIVE STATEMENTS

80.- According to the last paragraph of the text, which of these is TRUE?
a) Elements are atoms which make up elements.
[✓ b) An element is a substance which is made up of only one type of atom, which means that there are as many elements as there are atoms.]
c) Substances are made up of atoms which are not found on the earth in a pure state.
d) Substances are made up of one kind of atom which has to be prepared in a laboratory.

PART IV TEXT "ATOMS & ELEMENTS"

line 1	made up of	formado por
line 4	hastened	aceleraron
line 7	altogether	en total
line 10	arrangement	disposición
line 11	even	incluso
line 14	Therefore	Por lo tanto
line 17	grasp	hacerse una idea de
line 19	Since	Ya que

Resuelto.

ESCOLA UNIVERSITÀRIA POLITÈCNICA DE VILANOVA I LA GELTRÚ.

EXAMEN nº 1
ASSIGNATURA: **ANGLÈS 1 (INDUST.-TELECOM.)**
CODI DE LA PROVA: **340-73611-00-0-00**
CURS: **94-95**
CONVOCATORIA: **Examen final 9 de Juny 1995**
DURADA DE L'EXAMEN: **1 HORA I 35 MINUTS**
PUNTUACIÓ: **35 respostes correctes d'un total de 50 per tal d'aprovar.**
Les incorrectes no descompten.

I.- Identify the mistake in these sentences.

1) A number of forces ***(a) have been found*** TO ***~~that~~ exist*** in nature: electrostatic, magnetic, nuclear, etc. ***(b) Even though*** the details of the nuclear force are not known ***(c)yet***, it ***(d) has been suggested that*** the force is repulsive for very short separations and attractive at larger separations.

2) A solid is a rigid substance that maintains its shape against external forces, ***(a) whereas*** a fluid is a non-rigid substance (gas or liquid) ***(b) that does not never*** maintain its shape. ***(c)In discussing*** the properties of matter, it is convenient ***(d) to classify*** them into three states: gas, liquid and solid.

3) Newton ***(a) demonstrated*** that ***(b) despite of*** the common opinion of mankind, white light was not pure, ***(c)but*** a complex mixture of all the colours ***(d) of*** the rainbow.

4) ***(a) Most*** the experiments that ***(b) were carried out*** in the lab were a failure because there were not ***(c) enough instruments*** for students ***(d) to do*** them.

5) Great care ***(a) must be taken*** ***(b) when use*** + V.ING some of those instruments because they are extremely expensive. Last year, ***(c)in spite of*** the fact that the students were careful, an instrument fell off and broke down ***(d) while*** the teacher was there.

6) In my class, ***(a) most*** students come to practicals. However, some of them ***(b) hardly ever*** come because they say that ***(c)there is*** too ***(d) many people*** at the lab.
COUNT UNCOUNT.

7) Electromagnetism ***(a) began*** as an experimental science about 1600 with the careful observations of Gilbert on the forces ***(b) between*** two magnets and the forces between objects electrified by friction. Then, Benjaming Franklin deduced the correct law force by analogy with a known result for gravitation. ***(c)After,*** in 1820 Oersted observed a compass needle deflect from a nearby current. Nevertheless, Faraday observed in 1832 the generation of electric fields ***(d) by changing*** currents.

II. Choose the right option. Only one is correct.

8) The end sound for *wanted* is:
a) /t/ [✓ b) /id/] c) /d/ d) /ed/

9) The decimal 0.085 can be read as:
a) oh-point-nought-eight-five
b) oh-point-nought-eighty-five
[✓ c) nought-point-oh-eight-five]
d) nought-point-oh-eighty-five

10) *We have considered that he is one of the best candidates for the post.* **Choose the RIGHT passive sentence:**
a) It is considered to be one of the best candidates for the post.
b) It was cosidered that he is one of the best candidates for the post.
c) He has considered to be one of the best candidates for the post.
[✓ d) He has been considered to be one of the best candidates for the post.]

11) *They are saying that the old factory is going to be closed down.* **Choose the RIGHT passive sentence.**
a) The old factory is being said that it is going to be closed down.
[✓ b) It is being said that the old factory is going to be closed down.]
c) The old factory is said to be going to be closed down.
d) It is said that the old factory is going to be closed down.

12) He ____________________ for that company between 1980 and 1994. (He doesn't work there any more.)
[✓ a) worked] b) has worked c) had worked d) works

13) He failed his exam, but that is not very surprising, he ______________ comes to class.
a) ever [✓ b) hardly ever] c) hardly never d) hard

14) ____________________ work in this company is done by computers.
a) Most of b) More c) Most the [✓ d) Most]

15) The mixture must be heated ____________________ the solid particles dissolve.
[✓ a) so that] b) in order to + V. INF c) so as to + V. INF d) for

16) Choose the **RIGHT** alternative.
a) All this machinery is heavy enough ~~to~~ FOR us for carry.
[✓ b) All this machinery is too heavy for us to carry.]
c) All this machinery is ~~not~~ too heavy for to carry.
d) All this machinery is enough heavy to us.

17) Which sentence **MEANS** more or less **THE SAME AS**: *The new computer hasn't been used yet.*
   [✓ a)] The new computer still hasn't been used.
   b) The new computer hasn't been used already.
   c) The new computer hasn't still been used.
   d) The new computer hasn't just been used.

Compare these two cars.

	Price (£) (1981)	Engine capacity (cc)	Petrol consumption (mpg)	Maximum speed (mph)	Overall length (m)	Width (m)
Austin-Morris Ital 1·3	3889	1275	35	90	4·28	1·61
Volkswagen Jetta 1·3	4674	1272	35½	90	4·12	1·58

(N.B. mpg = miles per gallon; mph = miles per hour)

The Austin-Morris runs ***(18)***________________ the Volkswagen and ***(19)***____________ the Austin-Morris ***(19)***_____________ the Volkswagen have similar engine capacity, but the Volkswagen is ***(20)***______________than the Austin-Morris. The Austin-Morris is slightly longer and wider. ***(21) Nevertheless,*** it uses ***(22)***_________________ petrol than the Volkswagen. The Volkswagen is one of the ***(23)***________________ cars in the market.

18) a) faster than b) as fastly as [✓ c)] as fast as d) as fastly than

19) [✓ a)] both / and b) neither / nor c) not only / but d) Compared / to

20) a) cheaper b) more economical [✓ c)] less cheap d) less expensive

21) "***Nevertheless***" can be substituted by:
   a) While b) Despite [✓ c)] However d) Even though

22) [✓ a)] less b) few c) fewer d) least

23) a) better b) worse c) most good [✓ d)] best

ELECTROMAGNETISM

The electromagnet *(24)*__________________ in England by William Sturgeon, who *(25)*____________________ an iron rod and bent it into ***(26) the shape of a horseshoe***. This 'horseshoe' was coated with varnish and a layer of copper wire was wrapped *(27)*_________________ it. An electric current was passed ***(28) thorugh*** the wire, thus making the rod magnetic. The rod was now, because of magnetic attraction, able to support nine pounds of iron.

In the U.S., a scientist called Joseph Henry improved on Sturgeon's electromagnet *(29)*________________ the copper wire with silk. He was able to wrap many turns of wire around an iron core without danger of short circuits *(30)*___________________ the two turns. His magnet could hold 2,300.

This experiment prompted Henry to try his hand at converting magnetism *(31)*________________ electricity. *(32)*_______________ he coiled some insulated wire around an iron bar, connecting both ends of the wire to a galvanometer. The iron bar was placed across the poles of the electromagnet. *(33)*_________________ the coil of the electromagnet was connected to a battery. The galvanometer indicated a voltage, then dropped to zero. Henry signalled his assistants to disconnect the coil. The galvanometer showed that once again a voltage *(34)*__________________, although this time in the opposite direction. The principle of electromagnetic induction had thus been discovered. Unfortunately for Joseph Henry he *(35)*_________________ his findings and someone else (Faraday) got the credit for the discovery.

24) a) is invented b) invented [✓ c) was invented] d) were invented

25) a) taked b) was taken c) take [✓ d) took]

26) Which one is **WRONG**?
- a) The iron rod was shaped like a horseshoe.
- [✓ b) The iron rod was horseshoe in shape.]
- c) The iron rod was U-shaped.
- d) It was a horseshoe iron rod.

27) [✓ a) around] b) over c) through d) above

28) "***through***" can be substituted by:
a) by b) across c) beside [✓ d) along]

29) [✓ a) by insulating] b) by means of insulating c) with insulating d) when insulation

30) a) among [✓ b) between] c) through d) behind

31) [✓ a) into] b) on c) onto d) in

32) a) Next, b) The former, [✓ c) First,] d) Then,

33) Which one **CANNOT BE USED** here?
a) Then, b) Next, c) At this stage, [✓ d) Whereas,] ..., WHEREAS

34) a) had produced [✓ b) had been produced] c) were produced d) has been produced

35) [✓ a) didn't publish] b) don't published c) not published d) wasn't published

III. Read the following text and choose the right option. Only one is correct.

In the fifties, electronics had to face a new challenge, such as the reliability problems brought forth by the rapidly increasing complexity and size of equipments and systems. The solution to these problems was found in the resort to semiconductor components and following the introduction of silicon planar technology the reliability of discrete active elements was improved by several orders of magnitude.

By the early sixties, the complexity of computers and space research systems had reached the level at which interconnections were less reliable than components. Moreover, the prices had become excessive due to costs of developing and producing a great variety of good-quality discrete components. Fewer but better interconnections were needed, and the component density had to be increased ***(36) in order to*** reduce size and weight. It was clear that thinking in terms of components was no longer ***(37) sufficient*** because the above requirements could not be met without using an entirely new approach. The perception of this fact led to the now widespread concept of integration. The superiority of this lies in the fact that interconnected groups of circuit elements may be achieved with a single fabrication process. ***(38)***

Integrated circuits can be grouped in two basic categories: hybrid structures and monolithic structures. ***(39) In the former***, silk screening or cathode sputtering or vacuum evaporation is used to form passive elements (resistors, small-value capacitors, interconnections) on an insulating (glass, ceramic, etc) substrate, while the active elements, diodes and large-value capacitors are prefabricated and separately mounted. In the latter case, all elements, active and passive, are formed in a single-crystal chip of silicon. Monolithic circuits lend themselves to mass production, ***(40)***________ the hybrid form is more suitable for short-run production of special-purpose circuit designs.

Initially, it seemed that excessive component tolerances and the limited number of available building blocks ***(41)***____________ the use of monolithic integrated circuits in analog applications. ***(42)***__________, it became apparent that following some technological sophistication and making better use of such techniques might be a match not only for the hybrid form ***(43)***___________ for conventional circuits fabricated with discrete components. ***(44)***______ the mid-sixties, monolithic technology has experienced a rapid growth from the integration of single stages like differential amplifiers through the integration of smaller groups of stages to the implementation of multistage analog circuits with well-defined terminal parameters. These advanced devices can be classed in two categories: ***(45)***

-- general-purpose circuits, which may be operated in several different modes and lend themselves to the construction of more complex systems, and

-- functional circuits, which are capable of ***(46)***___________ all functions of a complete system or a larger subsystem.

For the latter type of circuit, the IC designer takes upon himself a fairly significant part of the systems designer's job. So much so that the user is usually exempted from further design work.

At present, the applications for which functional circuits have been developed are limited to consumer electronics. In the fields of telecommunications, industrial electronics, measurement and control, general-purpose circuits dominate. In this latter category, two types of circuits are of essential practical significance: operational amplifiers and analog multipliers. Operational amplifiers are useful as basic building blocks in innumerable linear and non-linear applications. Representing a fortunate coincidence of mass production and mass use, ***(47) they*** have experienced a really massive growth in recent years. Analog multipliers are considered mainly for non-linear applications. ***(48) Although*** they are not likely to become as wide-spread as operational amplifiers, they are no less important. ***(49)*** ***(50)***

(FROM: ANALOG INTEGRATED CIRCUITS by Miklós Herpy. John Wiley & Sons, Budapest 1980. p. 11-12)

36) "***in order to***" can be substituted in the text by:
a) so that b) for c) while [✓ d) so as to] + INF

37) "***sufficient***" means the same as:
[✓ a) enough] b) available c) already d) just

38) According to **paragraphs 1** and **2**, which of these is ***FALSE:***
a) In the fifties, electronics had an important problem with the reliability of equipments and systems because they were too big and complex.
b) The use of semiconductor components and the introduction of silicon technology solved the problems of electronics in the fifties.
[✓ c) By the early sixties, electronics had an important problem with components because they were not considered to be reliable enough.]
d) By the early sixties, the concept of integration of circuit elements in just one fabrication process solved the problems of electronics.

39) "***In the former***" refers to:
a) integrated circuits [✓ c) hybrid structures]
b) basic categories d) monolithic structures

40) a) in spite of = b) despite c) afterwards [✓ d) while]

41) a) limits [✓ b) would limit] c) had been limited d) can be limited

42) a) Although b) Even though [✓ c) However],... d) Despite

43) [✓ a) but also] b) neither c) either d) nor

44) a) Until b) For c) Ago [✓ d) Since]

45) According to **paragraphs 3** and **4**, which of these is ***TRUE***?
a) With hybrid structures, passive and active elements can be formed in a silicon chip.
b) Monolithic circuits are prefabricated and mounted for special types of circuits.
[✓ c) Monolithic integrated circuits can be used in analog applications by both hybrid and conventional circuits with discrete components.]
d) Monolithic integrated circuits are limited because they can't be used for analog applications.

TO BE CAPABLE OF + V.ING

46) a) perform [✓ b) performing] c) to perform d) performed

47) "***they***" refers to:
[✓ a) operational amplifiers] c) building blocks
b) types of circuits d) linear and non-linear applications

48) "***Although***" **CANNOT BE SUBSTITUTED BY** one of these. Which one?
a) Even though b) Though c) In spite of the fact that [✓ d) Despite]

49) According to the **last paragraph**, which of these is ***FALSE***?
a) General-purpose circuits are used for telecommunications, industrial electronics, measurement and control, whereas functional circuits are used for consumer electronics.
b) Both operational amplifiers and analog multipliers are considered to be part of general-purpose circuits.
[✓ c) Neither operational amplifiers nor analog multipliers can be used for linear applications.]
d) Analog multipliers are used less often than operational amplifiers. Nevertheless, they are just as important as operational amplifiers.

50) According to the text, which of these **titles best expresses the main idea**?

a) The history of electronics.
b) A classification of integrated circuits.
[✓ c)] The development of integrated circuits.
d) The applications of integrated circuits.

VOCABULARY.

PART 1.

3)	Mankind:	humanidad
	rainbow:	arco iris
7)	deflect:	desviarse, inclinarse
	nearby:	cercana

PART 2. TEXT: ELECTROMAGNETISM

Line 2	rod:	varilla
Line 3	horseshoe:	herradura
	varnish:	barniz
	layer:	capa
Line 4	wrap:	envolver
Line 5	thus:	por tanto
Line 8	silk:	seda
Line 9	core:	núcleo
Line 10	turns:	espiras de alambre
Line 16	coil:	bobina

PART 3 . TEXT.

line 1.-	challenge:	desafio
	reliability:	fiabilidad
line 2.-	brought forth:	puesta de manifiesto
line 3.-	resort to:	recurso de
line 8.-	Moreover:	Además
	due to:	debido a
line 11.-	in terms of:	en función de
line 12.-	requirements:	necesidades
line 13.-	approach:	enfoque
	led to:	llevó a
line 14.-	lies in:	yace, subyace en
line 17.-	silk screening:	difusor de pantalla de seda, serigrafiado
	cathode sputtering:	pulverización catódica
line 22.-	lend:	prestarse a
line 37.-	fairly:	bastante
line 48.-	growth:	crecimiento
	mainly:	principalmente
line 49.-	widespread:	de amplio uso

ASSIGNATURA: **ANGLÈS 1 (Tel-Ind.)**
IDENTIFICACIO DE LA PROVA: **340 73611 00 0 00**
CURS: **1994-95**
CONVOCATORIA: **Examen Avançat**
DURADA DE L'EXAMEN: 1 HORA I 45 MINUTS.
PUNTUACIO: 42 respostes correctes d'un total de 60 per aprovar. Les incorrectes no descompten.

1.- Identifiy *the mistake* in these sentences.

DESPITE + NOUN

1) ***(a) Most of*** metal detectors, ***(b) despite*** their technical complexity, are based on ***(c) a few*** very simple principles. The most important is ***(d) that of*** electromagnetic induction. This means that if an object is placed in a changing magnetic field, an electrical voltage is created in the object.

COUNTABLES →

2) Rain-water ***(a) is said to be*** "soft", because it lathers readily with soap, and the reason is that ***(b) it does not contain any*** calcium compound. The water ***(c) of*** reservoirs does not generally contain ***(d) much*** calcium compound, but well-water frequently does, and consequently, it is called "hard".

OF + V.ING

3) Archimedes' law can be explained like this: when a cube is completely ***(a) under*** water, if the weight of water displaced is greater than the weight of the cube, it will rise and float. If it is less than the weight of the cube, it will sink. ***(b) However***, if it is ***(c)the same as*** the weight of the cube, it will ***(d) neither float and sink.***

NOR

+ P.P.

4) ***(a) It can be said that*** new materials lead to new developments in technology. In modern electronics, for example, semiconductors have led to ***(b) many*** advances such as transistors, diodes and integrated circuits. Three examples of semiconductor materials are silicon, germanium and gallium arsenide. ***(c) Between*** the conductors, copper has been widely used for cables but lately it ***(d) is being replaced*** by optical fibers.

BETWEEN
AMONG

PRESENT CONTINUOUS PASSIVE → IS REPLACING

5) Heat ***(a) is thought to be derived from*** the sun with invisible electromagnetic waves that can pass ***(b) through*** a vacuum. ***(c) Although*** these waves are not hot, when the rays of the sun touch an object, they make it warm. This is known because the space between the sun and the earth remains quite cold, ***(d) in spite of*** the rays are travelling in it.

6) ***(a) In order to*** assemble and repair devices, electronic technicians need to interpret diagrams representing the layout of circuits. Technical literature uses different types of diagrams but ***(b) the most common one*** is the schematic. A schematic is a diagram ***(c) that show*** the configuration of the circuit using graphical symbols to represent ***(d) its*** various elements.

+ V.ING

7) ***(a) Before to can send*** a coded electrical message ***(b) along*** the wires, it was very difficult to overcome long distances in a short time. ***(c) It was not*** until 1833 that Samuel Morse first developed the telegraph and the first true telecommunications system using electrical signals ***(d) to carry*** messages appeared.

II.- Choose the right option. Only ONE is correct.

ELECTRONICS IN THE HOME.

Electronics *(8)* __________ at the start of the twentieth century with the invention of the vacuum tube. The first devices for everyday use were radios, followed by televisions, record players, and tape recorders. These devices *(9)*________ large and used a lot of power.

The invention of the transistor in 1947 meant that much smaller, low-powered devices *(10)*_______________. A wide variety of electronic devices such as hi-fi units and portable radios *(11)*__________ common in the home.

It was not *(12)*________1958 that microelectronics began with the development of ICs (Integrated Circuits on silicon chips). This led to a great increase in the use of electronics in everyday items. The introduction of the microprocessor allowed electronics to *(13)* + V, INF. ____________ controlling many common processes.

Microprocessors now *(14)*_________ to control many household items such as automatic washing-machines, dishwashers, central heating systems, sewing machines, and food processors. Electronic timers *(15)* ___________ in digital alarm clocks, water heaters, electric cookers, and microwave ovens. Telephones *(16)*_______ electronics to provide automatic dialling and answerphone facilities. New entertainment devices *(17)* ____________, such as video recorders and CD (compact disc) players.

In the future, electronics *(18)* _____________ even more and more common in the home because new multimedia entertainment systems and computer-controlled robots *(19)*____________ developed.

8) a) has begun b) began c) was begun d) had been begun

9) a) was b) have been c) had being d) were

10) a) had BEEN ~~being~~ developed
b) can been developed
CAN BE + P.P.
c) could be developed
d) ~~will~~ can develop
WILL BE ABLE TO

11) a) become b) became c) were become d) had became

12) a) once b) until c) on d) as soon as

13) a) be used for + V. GERUND b) have c) used for d) use to + V. INF

14) a) were used b) will use c) PRESENT PASTIVE are used P.P. d) are known P.P.

15) a) can ~~to~~ find b) can be found P.P. c) have to find HAVE TO BE + P.P. d) can been found CAN BE + P.P

16) a) use b) used c) will be used d) had been used

17) a) develop
b) will have develop
c) had developed
d) have been developed

18) a) probably became
b) are going to become
c) will probably become
d) is going become

19) a) were b) are now being c) was d) will

PRESENT CONTINUOUS

III.- Read the text and look at the table carefully to choose the right option.

Model	CPU	HD memory	RAM memory	CD ROM	Loud-speakers	Price	Applications
A	386SX	240Mb	2Mb	No	0	600£	DOS processor
B	486DX66	512Mb	16Mb	No	0	1150£	Windows processor
C	486DX66	720Mb	16Mb	Yes	2	1500£	Multimedia system
D	Pentium	1024Mb (1 Giga)	64Mb	Yes	2	3000£	CAD system & Multimedia system

Model D is the *(20)* ____________________ and also *(21)* ____________________, because it can have different applications, for example as a CAD and as a multimedia system. Moreover, it works *(22)* ____________________ than the other three models. Model A is considerably *(23)* ____________________ model D. It is *(24)* ____________________, has *(25)* ____________________ RAM memory and can only be used as a DOS processor. Model B is *(26)* ____________________ model C. It has *(27)* ____________________ Megabytes of RAM memory *(27)* ____________________ model C and *(28)* ____________________ have got the same CPU model. *(29)* ____________________, model B has got *(30)* ____________________ HD memory. Model B can be used as a Windows processor and is *(31)* ____________________ than model C. *(32)* ____________________, model C has two speakers and a CD ROM installed, so, *(33)* ____________________ B, it is a good value.

LEAST
20) a) least expensive [✓ b) most expensive] c) less economical d) most economical

21) [✓ a) the best] b) better c) the worst d) very well

22) a) fastlier b) more fast [✓ c) faster] d) fastest
FASTLY

23) a) different b) similar to c) unlike from [✓ d) different from]

24) a) the cheaper [✓ b) the cheapest] c) the most cheap d) the more cheap

25) a) the most b) the less [✓ c) the least] d) less

26) [✓ a) close to] b) resembles c) similar d) unlike

27) a) as much/as [✓ b) as many/as] c) so much/as d) as many/than

28) a) Neither B nor C [✓ b) Both B and C] c)B but not C d)Either B and C

29) a)While [✓ b) Nevertheless] c) Although d) In spite of

30) a) the least [✓ b) less] c) fewer d) few

31) [✓ a) slightly more economical] c) much more cheap
b) slightly more cheap d) a lot cheap

32) a) While b) Although c) Despite [✓ d) On the other hand]

33) a) With comparison to [✓ c) In comparison with]
b) In comparison to d) Compared to

IV.- Choose the right alternative. Only ONE is correct.

34) Which is the right pronunciation for the Simple Past of STOP?
a) /id/ b) /ed/ c) /d/ [✓ d) /t/] = STOPED

35) a) What companies ~~did began~~ to experiment with uranium?
b) What did companies begin to experiment with uranium?
[✓ c) What companies began to experiment with uranium?]
d) What companies did they begin to experiment with uranium?

36) Which one is WRONG?
This cylinder ________________.
a) is 30 cm long c) has a length of 30 cm. THE LENGTH OF IT IS | 30 cm
b) is 30 cm in length [✓ d) is 30 cm ~~of~~ length.] | MESURED IN CM.
IN

37) Which one is WRONG?

This antenna is____________.
a) shaped like a circle. c) circular in shape
NOUN ADJ
[✓ b) circle in shape] d) O-shaped
SHAPE LIKE THE LETTER O.

38) SMALL ENOUGH
a) This desk is ~~enough small~~ for to fit the computer.
FOR
b) This desk is too small ~~to~~ the computer.
c) This desk is too much small for the computer to fit. TOO MUCH + UNCOUNTABLE NOUNS
[✓ d) This desk is not big enough for the computer to fit.]
ADJ + ENOUGH + FOR

ALONG 1D
ACROSS 2D
THROUGH 3D

39) Radio frequency (RF) waves are used to carry audio frequency (AF) waves over long distances__________ the air. ← 3D
a) across 2D b) above [✓ c) through] d) onto
ATRAVESAR SOBRE ATRAVESAR

WHEN
BEFORE + V-ING

40) The most important factor OF... IN... __________ a digital oscilloscope is the sampling or digitizing rate because it determines the bandwidth.
[✓ a) in choosing] b) to ~~choosing~~ c) when ~~choose~~ d) for to choose
TO + V-INF. + V-ING

41) The modern era of satellite communication began on June 28, 1965, when Intelsat became operational, making possible direct communications __________ the United States and Europe.
a) among [✓ b) between] c) into d) over
ENTRE ENTRE ENTRAR SOBRE

42) Facsimile transmission involves the sending of a document ________ a telephone line and......

a) into b) on c) from [✓ d) along] → TD

43) ....the change of the received signal__________ a reproduction of the original. "Fax" machines can now send an A4 document, containing images as well as words, in less than a minute.

a) on b) from [✓ c) into] d) beside

44) For a long time hi-fi recordings have been produced on vinyl gramophone records. Records use an analogue recording system, which stores patterns ____________ a continuous groove in a vinyl disk.

a) by means cutting b) with cutting c) to cut [✓ d) by cutting]

BY + V.ING

45) It______________________ heat can be transferred by radiation, conduction and convection.

+ P.P.

a) has demonstrated
b) [✓ b) has been demonstrated that]
c) has demonstrated that
d) has been demonstrated

PASSIVE

46) At first it was believed that air consisted of a single gas. But by experiment, air_____ ________________of two important gases and traces of others.

a) it was discovered that consisted
b) discovered to consist
[✓ c) was discovered to consist]
d) was discovered that consisted

V.- Read the text carefully and choose the right alternative.

SKY POWER.

We know that there may be about 100,000 million stars in the Milky Way. But the most important thing for all life on earth is a ball of nuclear energy which is one of these stars and is called the sun. Like other stars, it releases a lot of heat and light. However, its heat can travel 150 million kms and still warm the atmosphere of the earth and give life to plants, animals and men.

Man ***(47)***________________________the sun. Today, perhaps, the worship is different from the past because we can use the sun energy to supply electricity or to perform the functions that electricity or other types of power usually perform. For example, people ***(48)***__________________ for many years the reflected heat of the sun to cook. In India and in the Middle East solar cookers have been built with several curved mirrors reflecting the sun. This apparatus can be used like a gas or electric stove; ***(49) it*** is more expensive to make but it does not need any fuel and it ***(50)***____________ to use. Another possibility ***(51)***__________ solar energy is in house-heating. The heat of the sun can be collected during the day in tanks of water or on the roof of a house, and the water can then be used to heat the house during the night by circulating it to the radiators. ***(52)***

One of the most successful applications of solar energy was put into operation about a century ago in 1872. This was a desalination plant in the Alabama Desert in Chile. Fresh water was needed for a nitrate mine, but there was ***(53) none*** in the desert. So a large water tank for salt-water was constructed. This was covered with a slopping glass roof. When the sun heated the salt-water during the day, it condensed on the glass roof and the drops of fresh water ran down the interior of the roof and were collected in channels ***(54)***_____ the bottom. This plant ***(55) was able to*** produce up to 6,000 gallons of fresh water a day. ***(56)***

(57) Communications satellites like Telstar and Early Bird have panels which absorb the heat of the sun and convert it into electricity. Astronauts on the Apollo and Skylab missions depended greatly on this kind of electricity because it was impossible to produce enough with fuel-driven generators in a spacecraft whose fuel capacity was so small. On the solar panels of a spacecraft there are hundreds of ***(58)*** solar cells, which together produce enough electricity to charge the batteries that supply electricity for lighting and heating the spacecraft and operating oxygen pumps, instruments, transmitters, receivers and TV cameras.

On earth, solar power ***(59)***____________________to produced terrific heat. Near Odeillo in Southern France a solar furnace has been built. This furnace is only used for experiments at present, but could be used to produce steam for a power station in the future. ***(60)***

47) a) worshipped always
b) always has worshipped
c) has always been worshipped
[✓ d) has always worshipped]

48) [✓ a) have been using]
b) have been used
c) was using
d) was used

49) *"IT"* on line 12 refers to:
a) an electric stove
b) a curved mirror
c) the sun
[✓ d) the apparatus]

50) a) costs anything
b) doesn't cost nothing
[✓ c) costs nothing]
d) don't cost anything

51) a) for use FOR TO +V. INF.
[✓ b) of using] OF +GERUND
c) of to use
d) of use

52) Which one is **TRUE** according to the ***second paragraph***?

[✓ **a)**] Today man also worships the sun but in a much more modern way and not in the old religious sense, because he can use the sun energy to supply electricity for his needs.
b) The reflected heat of the sun has been used in India and in the Middle East to provide heating for houses.
c) The heat of the sun cannot be used in house-heating.
d) Solar cookers can use the heat of the sun, just like a gas or an electric stove, with several curved mirrors that reflect the sun and some fuel.

53) What does *"NONE"* (line 19) refer to?
a) a desalination plant
[✓ b) fresh water]
c) a nitrate mine
d) solar energy

54) a) to b) onto [✓ c) at] d) into

55) *"WAS ABLE TO"* (line 23) has a synonym in:
a) needed b) should c) had to [✓ d) could]

56) Which is **TRUE** according to the ***third paragraph***?
The desalination plant in the Alabama Desert...

a) turned salt-water into fresh-water with nitrate.
b) used a slopping glass to collect water from the rain.
[✓ **c)**] used the sun heat to separate the salt, condensed on a glass roof, from water.
d) separated salt-water from fresh-water in a nitrate mine.

57) According to lines 25-29 in the **fourth paragraph,** ***why did astronauts on the Apollo and Skylab missions depend greatly on the heat of the sun?***

a) Their generators were too small to absorb the heat of the sun. FOR TO
b) The fuel-driven generators were so small that they couldn't produce enough electricity for the spacecraft.
c) Fuel-driven generators were not powerful enough to produce all the electricity needed for the panels. +NOUN
[✓ **d)**] The fuel capacity of the spacecraft was very small to produce enough +NOUN electricity with only fuel-driven generators.

58) According to lines 29-32 in the **fourth paragraph**, ***what do solar cells really do***?

- **a)** they charge transmitters, receivers and TV cameras.
- **b)** they supply electricity for the solar panels.
- [✓ **c)**] they produce electricity for the spacecraft.
- **d)** they charge the batteries used for lighting and heating.

p.p.

59) [✓ a) has already been used]   c) has already used
b) has still been used   d) has been used yet

60) According to the text, ***how many applications of solar energy are mentioned?***

- [✓ **a)**] in cookers, in house-heating, in desalination plants, in communication satellites, in spacecrafts and in solar furnaces for experiments.
- **b)** to supply electricity in cookers, in radiators, in communication satellites and in solar cells for experiments.
- **c)** in cookers and in house-heating at home, to collect water from the rain, in satellites, in space batteries and in power stations.
- **d)** in mirrors to reflect the sun for house-heating, in desalination plants, in satellites and in power stations.

VOCABULARY

PART 1.-

2.- lathers---------------> crea espuma
soap-----------------> jabón
3.- sink------------------> hundirse
4.- lead to (led)---------> llevar a
5.- vacuum-----------> vacío
remains----------> permanece
6.- layout---------> esquema, dibujo
7.- overcome-------> recorrer

PART 2.- Text: ELECTRONICS IN THE HOME.

line 5 low-powered---------------------> de poca potencia.
line 10 items------------------------------> artículos.
line 12 household-----------------------> del hogar.
line 13 sewing-machines----------------> máquinas de coser.
line 15 ovens-----------------------------> hornos.

PART 3.- Table (Comparison of computers).

line 3 Moreover-----------------------> Además
line 11 Loudspeakers (speakers)-------> Altavoces

PART 4.- Multiple choice.

38) fit---------------------> colocar, poner.
40) sampling-------------> muestreo.
digitizing rate-------> porcentaje (rapidez) de digitalización.
42) Facsimile------------> Fax
involves-------------> implica
44) store patterns-------> almacenar modelos.
groove---------------> surcos.
46) traces----------------> restos.

PART 5.- Text: SKY POWER.

line 3 releases-----------------> libera.
line 6 worship-----------------> adoración.
line 8 perform-----------------> realizar.
line 10 cookers-----------------> cocinas.
line 11 stove--------------------> horno (de cocina)
line 14 roof---------------------> tejado
line 20 slopping----------------> inclinado.
line 22 drops--------------------> gotas.
line 28 fuel-driven--------------> que funciona con combustible.
line 31 pumps-------------------> bombas.
line 34 furnace------------------> horno (grande, de tipo industrial).
line 35 steam--------------------> vapor

EXAMEN nº 1
ASSIGNTURA: **ANGLES I**
IDENTIFICACIO DE LA PROVA: **340 721 00**
CURS: **1993-94**
CONVOCATORIA: **Examen AVANÇAT DE DESEMBRE 93**
DURADA: **1 HORA i 45 MINUTS**
PUNTUACIO: **49 respostes correctes d'un total de 70. Les incorrectes no descompten.**

I. Choose the right alternative. Only one is correct.

1.- Which word corresponds to the following phonetic transcription? /saɪəns/
a) since b) signs [✓ c) science] d) sins

2.- The right pronunciation of *"wanted"* is:
a) /ed/ [✓ b) /id/] c) /t/ d) /d/

3.- How wide is that pocket calculator? 23-24
a) It has 2 cm in width. ⇒ IT HAS A WIDTH OF 2 CM.
[✓ b) It is 2 cm wide.] ⇒ IT IS 2 CM IN WIDTH.
c) The width of that pocket calculator ~~has~~ IS 2 cm.
d) The ~~wide~~ of that pocket calculator is 2 cm.

4.- "That aerial is X-shaped" FORMA means: 25
a) The letter X is shaped like an aerial.
b) The aerial is triangular in shape.
[✓ c) The aerial is shaped like the letter X.]
d) The aerial ~~has~~ shaped the letter X.

ADJ + ENOUGH + FOR (NOUN)
TO (VERB)
ENOUGH + NOUN

5.- Which of these is correct? 28
a) This programme is good enough for TO VERB ~~make~~ a simulation.
[✓ b) It is a good enough programme to make a simulation.]
c) This programme is enough ~~good~~ to make a simulation.
d) It is a programme good enough for to make a simulation.

6.- The decimal 14.053 can be read as:
a) fourteen point oh-fifty-three
b) fourteen comma zero-fifty-three
c) fourteen comma nought-five-three
[✓ d) fourteen point oh-five-three]

INDIRECT INSTRUCTIONS. 111
WHEN + V. ING
IN + V. ING
+WITH

7.- Don't forget to protect your eyes______________ a dangerous substance in the chemistry laboratory.
a) when ~~use~~ [✓ b) when using] +V.ING c) in ~~to~~ use d) for using ??

BY
BEFORE + V.ING
113

8.- How can you measure temperature?
Temperature can be measured__________________ a thermometer.
[✓ a) by means of] +NOUN
b) for ≈ MEDIANTE
PARA = c) in order to+have (INFINITIVE)
d) with ~~using~~ WITH + NOUN

9.- The new laser printer is______________ my personal computer and the keyboard is______________ the monitor.
a) next / in front
b) next of / in front of
c) next to / in front of
d) next / in front of

10.- ________________ any instructions book for the printer in the package.
a) It wasn't   c) There weren't
b) They weren't   [✓ d) There wasn't]

11.- Did those engineers have to attend a congress in San Francisco?
Yes, they____________.
[✓ a) had]   b) have   c) did   d) must

12.- Some houses used solar energy for heating the rooms.
[✓ a) What did some houses use solar energy for?]
b) What used some houses solar energy for?
c) For what did some houses use solar energy?
d) What did use some houses solar energy for?

13.- That new material__________________ solve some of the problems the plastics industry has.
a) will can   [✓ c) will be able to]
b) is going TO + INF   d) will be able TO + INF

14.- How long ago________________ his first book?
a) has he written   c) he wrote
[✓ b) did he write]   d) has he been writing

15.- When the teacher finally appeared, we__________________ for more than twenty minutes.
PAST SIMPLE
[✓ a) were waiting]   c) waited
b) have been waiting   d) had been waiting

16.- Some companies_________________that system.
a) haven't never used   c) don't have used
b) didn't have used   [✓ d) have never used]

17.- Diamonds and coal are made______________the same chemical element.
a) in   b) of   [✓ c) by]   d) for

18.- The temperature dropped___________zero in December. It was much colder than last year.
a) less   c) under
b) above - sobre   [✓ d) below] - BAJO

19.- There was a good programme about Electronics____________TV last night.
[✓ a) on]   b) in   c) at   d) into

20.- One of the most interesting ideas is that high-speed trains going______________ the tunnel could pull fresh air behind them.
a) across   b) by   c) between   [✓ d) through]

21.- The information obtained_______________ the centre of technical support was very valuable for us.
a) of   b) into   [✓ c) from]   d) across

22.- Don't forget to show you identity card_______________ the exam.
a) before take
[✓ b) before taking]
BEFORE + V.ING
c) before to take
d) before you taking

23.- ____________the U.K., the U.S.A. measures large areas in terms of square miles (m^2).
[✓ a) As]
b) Whereas
c) Like
d) How

24.- Scientists have studied the universe_______________ many centuries.
[✓ a) since]
b) from
c) in
d) for

25.- I have been doing the same kind of work_______________ I started working for that company.
PRESENT PERFECT
PAST SIMPLE
[✓ a) when]
b) since
c) yet
d) from

26.- a) He hasn't finished reading that book already. ✗
b) He hasn't already finished reading that book.
c) He hasn't finished reading yet that book. ✗
[✓ d) He still hasn't finished reading that book.] ✓

27.- They started studying Telecommunications at EUPVG 3 years ago and they still + study here, so_______________________.
PAST SIMPLE
a) they studied at EUPVG for 3 years. ✗
b) they have studied at EUPVG since 1991.
[✓ c) they have studied at EUPVG since 3 years ago.]
d) they studied at EUPVG 3 years ago. ✗

28.- a) He's just went to the library a moment ago.
b) He is just gone to the library.
c) He has gone just to the library.
[✓ d) He has just gone to the library.] JUST → PRESENT PERFECT

29.- The first aeroplanes that appeared were very different ___________ the modern planes we have nowadays. (SUPERLATIVO)
a) than
b) from
c) that
[✓ d) of]

30.- Which personal computer is_____________ an Olivetti or a Mackintosh?
a) best
b) ~~more~~ good
c) the better
BEST
[✓ d) better]

31.- Rubber is a bad conductor of electricity. It is a____________________ aluminium.
[✓ a) worse conductor than]
b) worst conductor than ✗
c) less bad conductor that
d) so bad conductor as

32.- You can invite__________________ you want to your final project defense.
a) as many people as
b) as people as
[✓ c) as much people as]
d) many more people than

33.- Telefax has its_____________ market in Japan where the complexity of Japanese script makes this an ideal medium of transmission.
[✓ a) bigger than]
b) ~~more~~ big than
BIGGER
c) more big
d) biggest
BIG BIGGER BIGGEST

34.- John drives_______________ of all my friends.
a) the m~~o~~re careful
b) the m~~o~~re carefully
c) the most careful
[✓ d) the most carefully]

35.- That printer is_________________ my father's.
a) the same than
b) the same as
[✓ c) as same as]
d) different than

36.- First, check all the data_______________be successful with the experiment.
a) for to
b) for
[✓ c) in order to] + INF
d) so as TO + INF.

37.- Optical fibres have many advantages over conventional cables; for example, with conventional cable you can transmit_____________________telephone calls than with optical fibre.
a) many less
[✓ b) many fewer]
c) much less
d) much fewer

38.- The experiment________________ by some young scientists in 1985. It was very successful.

CARRY -LLEVAR

a) was carried away LLEVARSE ARREBATAR
[✓ b) was carried out] LLEVAR A CABO
c) were carried on CONTINUAR, SEGUIR
d) were carried about ?

39.- A new experiment about the effects of ultra-high speeds ________________ while I was working at the University laboratory.
a) is been tested
[✓ b) was been tested]
c) was being tested
d) were testing

40.- Thick gloves________________ if you have to deal with dangerous substances.
a) should be worn
b) should been worn
[✓ c) should have worn] SHOULD HAVE + PAST PARTICIPLE
d) could being worn

41.- "However" is a synonym of:
a) Consequently
[✓ b) Nevertheless]
c) Therefore
d) Whereas

HOWEVER
NEVERTHELESS
ALL THE SAME

42.- ________________ of being a promising engineer, he didn't get the job in the firm.
a) Although + SUBJECT + VERB.
b) Despite
c) Even though
[✓ d) In spite]

ALTHOUGH = EVEN THOUGH
IN SPITE OF = DESPITE
IN SPITE OF + GERUND.
+ NOUN.

43.- The sentence "*The transmission of the signal was at a different frequency from yesterday's*" means:
a) The frequency of the signal was transmitted yesterday. ✓
[✓ b) The signal was transmitted at a different frequency from yesterday's.]
c) Yesterday we transmitted the frequency of the signal. ✓
d) The signal of the transmission was received at a different frequency from yesterday's. ✓

44.- ________________ the water level has started to rise, the experiment is coming to an end.
a) Then
b) Next
c) Once
d) Firstly

45.- The passive form of *"We know that this material has the best properties"* is: PRESENT → IS/ARE KNOWN

IS KNOWN | TO (BE) / THAT

a) This material has been known by us that it has the best properties.
[✓ b)] This material is known to have the best properties.
→c) This material is known that it has the best properties. !!!
d) They are known this material has the best properties.

46.- The first domestic satellite system was established in 1869, __________________ the first regional system did not develop until the mid 1970s.
a) despite ≡ c) in spite of
b) on the other hand,... " HOWEVER
d) whereas = WHILE

47.- _______________ satellites have a high reliability, many earth stations are frequently affected by the weather and require more maintenance.
a) Even though
b) In spite of
c) Compared with
d) Until

48.- Water is__________________________.
a) neither odourless ~~or~~ colourless.
b) not neither odourless nor colourless.
→c) neither odourless nor colourless.
d) not odourless nor colourless,

49.- They modified the new model after they_________________all the necessary information.
a) had obtained PAST SIMPLE + PAST PERFECT
b) were obtaining
c) have obtained
d) obtain

II. Read the text carefully and choose the right answer.

THE VALUE OF TRANSISTORS.

(50) If we consider the size of transistors, we may say that they will be used every time efficient amplification is required within a small space. The portable transistor radio is only one example, and may not even be the most important. Another is the (51) ***bearing aid****, which can be made so small that it can become part of the frame of a pair of glasses. However, all kinds of electronic equipment (as for guiding rockets or for recording) which could in principle use valves, can be made much better and more reliable with transistors.*

That is why the total number of transistors produced in the world each year is enormous, (52)__________ only forty years have passed since their original invention. In 1947 they were completely unknown. In 1948 a few were made. In 1950 the number must have been thousands, and maybe even hundreds of thousands. The estimated production (53)________________ tremendously since then.

This is going to make a big mark on our way of life. More and more people will become designers, makers, testers, and certainly users of transistors. What is more, many complicated operations in industry and commerce which are now (54) ***performed*** *by people in the future will be performed by transistorized equipment.*

When we say that a material is (55) a semiconductor, we mean that it conducts electricity much less well than a metal, and much better than substances like glass and porcelain which we normally regard as insulators. The term 'semiconductor' actually covers a very wide range of electrical properties. It is not possible to name any particular conductivity (56)_____________ metals end and semiconductors begin.

What kinds of substances are these semiconductors? All kinds, really, and too many to list. (57)____________ them are chemical elements like germanium and silicon, and a lot of chemical compounds such as oxides and sulphides. Not all are useful for transistors, but in practice germanium and silicon are.

It has long been known that the electrical properties of semiconductors depend very much on their purity. The only way in which (58) ***this*** *can be properly investigated and controlled is to start off with a material which is highly pure, and then to add various chemicals in small quantities, (59)* ***so that their effects can be studied****. Generally speaking, (60)* ***the electrical conductivity increases when more impurity is added.***

A tremendous amount of work has been done on the purification of the starting material; until today germanium is the purest substance on earth, with no exception. It can very easily be made in the form of a single crystal with an impurity content of only one part in a hundred million or even a thousand million.

50.- *What uses of transistors are mentioned in the text? (See 1st paragraph).*
- *a) The portable transistor radio, rockets and recording.*
- *[✓ b) The portable transistor radio, the hearing aid and all kinds of electronic equipment.]*
- *c) Amplifiers, the portable transistor radio, the hearing aid and valves.*
- *d) The portable transistor radio, the hearing aid, a pair of glasses and valves.*

51.- *According to the text. Can you guess what* ***a hearing aid*** *is? (line 5)*
- *a) An electronic device used for recording.*
- *[✓ b) An electronic device for helping deaf people to hear.]*
- *c) An electronic device used for portable transistor radio.*
- *d) A part of electronic equipment.*

52.- *a) despite* ≡ *b) in spite of* *[✓ c) although]* *d) while*

53.- *[✓ a) has increased]* *b) increased* *c) has being increased* *d) had increased*

54.- *"**performed**" (line 20) has a synonym in:*
a) realized *b) worked* *c) invented* *[✓ d) carried out]* PERFORM = EJECUTAR

55.- *According to the text, what is a semiconductor? (4th paragraph)*
- *[✓ a) A substance that conducts electricity in certain conditions, but not as well as metals.]*
- *b) A material that can conduct electricity as well as insulators like glass and porcelain.*
- *c) A material that can conduct electricity better than glass and porcelain and even better than any metal.*
- *d) A material that conducts electricity through insulators.*

56.- *a) whose* *[✓ b) at which]* *c) in that* *d) for whom*

57.- *a) Between* *b) In* *[✓ c) Among]* *d) For*

58.- *"**this**" (line 36) refers to:*
[✓ a) purity] *c) material*
b) semiconductors *d) electrical properties*

59.- ***"so that their effects can be studied"*** *(line 38) means the same as:*
- *a) to avoid studying their effects.*
- *[✓ b) in order to be able to study their effects.]*
- *c) to prevent from studying their effects.*
- *d) whereas those effects can be studied.*

60.- ***"the electrical conductivity increases when more impurity is added"*** *(line 39) means:*
- *a) the less impurity a semiconductor has, the better conductor it is.*
- *b) the most impurity a semiconductor has, the best it is.*
- *[✓ c) the more impurity a semiconductor has, the better conductor it is.]*
- *d) th least impurity a semiconductor is, the best conductor it is.*

III.- Read the text and choose the right alternative for each case.

THE NUCLEAR PROBLEM.

*On 16th July 1945, the world's first experimental nuclear explosion **[61]**___________ in the New Mexico desert. The world entered the Atomic Age. Only a few months after that explosion, scientists in Britain and America **[62]**_____________ on a new problem: How can we control the great energy of a nuclear explosion to make it work for us in times when there is no war? In 1946 men saw the light of a new world with the atom at work to give us all a much better life.*

*How can nuclear power be produced? Today it **[63]**_______________ in a nuclear power station, in the form of heat from fission of atoms of plutonium or uranium. Fission is easy with Uranium 235. It is the only natural material that scientists have found for this. Many countries **[64]**___________ solar energy since 1946. In all the industries the need for energy **[65]**____________ very fast now. The U.S.A., for example, **[66]**___________ twice as much electricity in the next ten years.*

*The world's reserves of oil and natural gas are becoming smaller, so perhaps nuclear power is the only way of **[67]**____________ the energy we need. For countries which are stronger industrially atomic energy offers great hope.*

*However, many important scientists say that nuclear power can be **[68]**_____________ man has met since human life on earth began. This is because a nuclear generating plant produces a lot of radioactive material. Until the atomic age, natural radiation remained at the same level. But nuclear stations have changed that. They **[69]**_______________ thousands of tons of highly radioactive fission products, and they will continue to produce them in the future. Until we can control nuclear power to make it completely safe, it cannot be the answer to the energy problem. **[70]***

61.- a) takes b) is taking c) has taken [✓ d) took]

62.- a) were working [✓ b) are working] c) work d) have worked

63.- a) must ~~to~~ be produced [✓ b) is producing] c) is usually produced d) can produce BE PRODUCED

64.- a) had been used [✓ b) have used] c) used d) were being used

65.- a) will increase b) is increased [✓ c) is increasing] d) increased

66.- [✓ a) are going need] b) will be needed c) needs d) will need

67.- a) getting b) got [✓ c) to get] d) get

68.- a) the thing most dangerous
b) the more dangerous thing
c) the less dangerous thing
[✓ d) the most dangerous thing]

69.- a) have produced already
b) already have produced
c) produced already
[✓ d) have already produced]

70.- According to the text:
- *a) There is a shortage of oil and natural gas, and nuclear power offers a possible but also a dangerous solution to this problem.*
- *b) Nuclear power cannot be controlled.*
- *[✓ c)] Nuclear power is the answer to the energy problem.*
- *d) Nuclear generating plants will be stopped because they produce radioactive material and this is very dangerous.*

VOCABULARY.

SECTION I.

4.-	*aerial:*	*antenna*
10.-	*package:*	*paquete*
11.-	*attend:*	*asistir*
13.-	*solve:*	*solucionar*
18.-	*drop:*	*bajar*
20.-	*pull:*	*arrastrar*
21.-	*centre of technical support:*	*Centro de Cálculo*
31.-	*rubber:*	*goma*
32.-	*final project defense:*	*lectura del proyecto de final de carrera.*
33.-	*script:*	*escritura*
40.-	*gloves:*	*guantes*
	deal with:	*tratar (con)*
42.-	*promising:*	*prometedor*
47.-	*reliability:*	*fiabilidad*
48.-	*odourless:*	*inodoro*

SECTION II. THE VALUE OF TRANSISTORS.

line 1	*size:*	*tamaño*
line 3	*within:*	*en*
line 6	*frame:*	*montura*
line 7	*rockets:*	*cohetes*
line 9	*reliable:*	*fiable*
line 25	*regard as:*	*considerar como*
line 26	*range:*	*gama*

SECTION III. THE NUCLEAR PROBLEM.

line 11	*twice as much:*	*el doble*
line 14	*hope:*	*esperanza*
line 17	*remain:*	*permanecer*
line 19	*tons:*	*toneladas*
	shortage:	*escasez*

ASSIGNATURA: ANGLÈS 1 (Telec-Ind.)
CODI: 340-73297-00-0-00
CURS: 1996-97
CONVOCATORIA: 12 de Febrer 1997
DURADA DE L'EXAMEN: 1 hora i 30 minuts.
PUNTUACIÓ: 35 respostes correctes d'un total de 50 per aprovar. Les incorrectes no descompten.

I. Identify the mistake in the following sentences.

1) Archimedes' law can be explained like this: when a cube is completely ***(a) under*** water, if the weight of the water displaced is greater than the weight of the cube, it will rise and float. If it is less than the weight of the cube, it will sink. ***(b) However,*** if it is ***(c) the same as*** the weight of the cube, it will ***(d) neither float and sink.***

NOR

2) The Diesel engine ***(a) differs from*** Otto's engine primarily ***(b) in that*** the temperature at the end of the compression process is very high. This temperature is obtained ***(c) by continuing*** the compression step to a ***(d) more higher pressure***.

BY + V.ING

3) ***(a) It is said that*** robots have many advantages over human beings. ***(b) Even though***, humans can do many things that robots can't. For example, humans can carry out a task without ***(c) having to be told*** exactly how to do it first. And ***(d) unlike robots***, humans can communicate with each other.

4) Computers as we know them today, ***(a) haven't been*** around ***(b) since a long time***. It wasn't ***(c) until*** the mid 1940s that the first digital computer was completed. But ***(d) since*** then, computers have developed tremendously.

PAST SIMPLE MADE - MADE - MADE

5) In 1819 an important discovery ***(a) was made*** by Oersted, who found that a magnetic needle could be deflected ***(b) by*** an electric current flowing ***(c) through*** a wire. This discovery, which showed a connection ***(d) among*** electricity and magnetism was followed up by Ampère.

BY + AGENT IN THE PASSIVE "" UNSPECIFIED

6) ***(a) In order to*** assemble and repair devices, electronic technicians need to interpret diagrams which represent the layout of circuits. Technical literature uses different types of diagrams but ***(b) the most common one*** is the schematic. A schematic is a diagram ***(c) that show*** the configuration of the circuit using graphical symbols to represent ***(d) its*** various elements.

+V.ING

7) ***(a) Before to can send*** a coded electrical message ***(b) along*** the wires, it was very difficult to overcome long distances in a short time. ***(c) It was not*** until 1833 that Samuel Morse first developed the telegraph and the first true telecommunications system using electrical signals ***(d) to carry*** messages appeared.

8) Chemistry ***(a) has had*** an enormous influence on human life. In earlier periods chemical techniques were used to isolate useful natural products. In the 19th century techniques were developed for ***(b) synthesizing*** completely new substances that were ***(c) either*** better than the natural ones or could replace them ***(d) more cheaper.***

9) ***(a) The most important*** advances in chemistry in the 19th century were in the field of organic chemistry. The structural theory was not mathematical, ***(b) but*** employed ***(c) its*** own logic. It made possible the prediction and preparation of ***(d) much more*** new compounds.

MUCH MORE + NOUN?

II. Choose the right option. Only ONE is correct.

10) The fraction 5 3/4 can be read as:
- a) five, three fourths
- [✓ b) five and three quarters]
- c) five and three fourths
- d) five, three quarters

11) The percentage 0.05% can be read as:
- [✓ a) nought-point-oh-five per cent]
- b) oh-point-nought-five per cent
- c) nought-comma-oh-five per cent
- d) oh-comma-nought-five per cent

12) The length of this box is 30 cm. This sentence ***MEANS THE SAME AS***:
- a) This box has A lenght of 30 cm.
- b) This box is in length 30 cm.
- [✓ c) This box is 30 cm in length.]
- d) The lenght of this box is ~~in~~ 30 cm.

13) Which one is ***WRONG***?
- a) This antenna is O-shaped.
- b) This antenna is shaped like the letter O.
- c) This antenna is circular in shape.
- [✓ d) This antenna is like O-shaped.]

14) There is ____________ in the solution. It doesn't need any more.

a) salt enough   [✓ b) enough salt]   c) too salt   d) much too salt

ENOUGH + NOUN   TOO + ADJ + FOR   TOO MUCH SALT

15) We didn't enjoy the party; there were far ____________ there.

[✓ a) too much people]   b) too ~~many~~ people   c) enough people   d) ~~people~~ enough

16) We walked ____________ the stairs to the top floor.

[✓ a) up]   b) down   c) through   d) along

ATRAVESAR   A LO LARGO

17) What are you wearing ____________ your lab coat?

a) in   b) below   [✓ c) under]   d) into

DENTRO   POR DEBAJO   DEBAJO   METERSE DENTRO

18) We stayed at a hotel ____ABOVE____ the lake.

a) on   b) onto   c) over   [✓ d) above]

EN   ENTRAR   SOBRE   POR ENCIMA

19) Who was the first person to swim ____________ the Atlantic?

[✓ a) across]   b) along   c) through   d) past

20) This ring was made ____________ an old pair of gold earrings.

a) of   [✓ b) from]   c) into   d) for

A PARTIR DE   ORIGIN

21) When that scientist came back, he was happy to be ____________ friends again.

a) in   b) between   [✓ c) among]   d) along

DENTRO   ENTRE   ENTRE   A LO LARGO

22) Paul has been looking for a job for months, … .Which one is ***WRONG***?

a) … but he hasn't found one yet.
b) … but he still hasn't found one.
c) … and he has already found one.
d) … and he just has found one. = HAS JUST FOUND (PRESENT PERFECT)

23) The first telephone circuits ____________ very simple.

a) was b) were c) have been d) had been

24) The invention of the telephone _____________ a great influence on modern society.

a) has had b) had c) have had d) has

25) The new talking computer _____________ several times before it _____________ to the computer exhibition.

a) has been tested / was brought
b) was tested / had been brought
c) had been tested / was brought
d) had tested / brought

PAST SIMPLE + PAST PERFECT
BEFORE + PAST SIMPLE
↳ AFTER / BEFORE + | V. ING. / CLAUSE.

26) Which one is ***RIGHT***?

a) Computer A is much better than computer B.
[✓ b)] Computer A is much good than computer B.
c) Computer A is worst than computer B.
d) Computer A is the best than computer B.

LITTLE LESS LEAST
FEW FEWER FEWEST

27) Circuit A has ___________ voltage than circuit B.

UNC.

[✓ a)] less
UNCOUNTABLE
b) fewer
COUNTABLE
COMP.
c) little
d) the least ___ OF... IN...
SUPERLATIVE

28) Discrete circuits require ___________ solder joints and mechanical connections than ICs.

CONJUNTO

a) the fewest b) the least c) less [✓ d)] fewer

29) Which is the ***RIGHT*** one?

a) The more complicated the problem, the harder it is to find a solution.
b) The most complicated the problem, the hardest it is to find a solution.
c) The less complicated the problem, the harder it is to find a solution.
d) The more complicated the problem, the more hard it is to find a solution.

REALIZAR

30) I carried out the experiment _____________ than you .

a) more careful
ADJ.
b) less carefully
ADV.
c) more better
GOOD - BETTER - BEST
d) most carefully

31) Copper cables are _____________ than optical fibres.

a) many heavier b) much more heavy c) much heavier d) more heavy

+ NOUNS (UNCOUNTABLE) TOO MUCH + NOUN! (UNC.)

32) ____________ refractory metal elements were discovered about 200 years ago, their use as engineering materials and alloys did not begin until about the 1940s.

a) Nevertheless, ... [✓ b)] Despite + NOUN c) However, ... d) Although + FRASE SUBORDINADA)

33) It is difficult to make predictions about technological changes in the future.
_____________, it is possible to get some idea of the changes which might occur.
a) Since b) However, ... c) Despite + NOUN d) While

34) A.G. Bell invented the telephone in 1876 and some years later, the radio ___________ by Marconi.
a) were invented b) had been invented
c) is invented d) was invented

35) Metals -------------- by three basic methods: mechanical, thermal and adhesive.
a) can be joined - P.P. b) must ~~joined~~ c) have joined d) should be + P. PARTICIPLE.
MUST BE + P.P. HAVE TO BE + P.P.

36) The Intelsat, which _______________ on April 6, 1965, remained active until 1969.
a) had launched b) were launched c) has been launched d) had been launched

37) Which one is ***RIGHT***?
a) Recently new satellites were tested. TESTED PAST SIMPLE
b) Recently new satellites have been tested. HAVE TESTED PRESENT PERFECT (PASSIVE)
c) Recently new satellites had been tested. HAD TESTED PAST PERFECT
d) Recently new satellites have ~~tested~~.

38) *It is known that sunbathing causes skin cancer*. This sentence ***MEANS THE SAME AS***:
a) Skin cancer is known to be caused by sunbathing.
b) Skin cancer is known to cause sunbathing.
c) Sunbathing knows to cause skin cancer.
d) Sunbathing is known to be caused by skin cancer.
PIEL

39) Which one is ***WRONG***? EL ESPACIO
a) It is said that beings from outer space have visited the earth.
b) Beings from outer space are said to have visited the earth.
c) Beings from outer space say to visit the earth.
d) People say that beings from outer space have visited the earth.
? SERES DE

OUTER = EXTERIOR

VOCABULARY.

PART 1. Identify the mistake

1) sink:	hundirse
5) deflected:	desviarse
6) layout:	esquema

PART 2.

20) earrings:	pendientes
28) solder joints:	soldaduras
36) launch:	lanzar al espacio
38) Sunbathing:	baños de sol
skin:	piel

PART 23. TEXT. COMPUTERS OF THE FUTURE.

line 6	trends:	tendencias
line 10	built-in computers:	ordenadores incorporados
	bills:	recibos
line 11	tasks:	tareas
line 12	feature:	característica
line 15	speech synthesizers:	sintetizadores de voz
line 17	push:	impulso, empuje
line 21	subtle command:	sutil dominio
line 24	bleak:	poco prometedor
line 25	afford:	permitirse
line 27	concern:	preocupación
line 30	in the long run:	a la larga
line 31	skilled:	especializados
line 34	threat:	amenaza
	denying:	negando
line 35	overtake:	imponerse a
	rule:	gobernar

III. Read the text carefully and choose the right option.

COMPUTERS OF THE FUTURE.

Over the last forty years computers have developed dramatically. They have become smaller and cheaper, and more and more powerful. The first computers could do relatively *[40] few* calculations a second, *[41]*__________ the present mainframe can carry out millions of instructions each second. In the past only highly trained computer experts *[42] were able to* use computers. But, as they became cheaper and smaller and easier to operate, many people such as doctors, teachers, librarians, architects, artists and even people at home are now finding that a computer can help them. These trends will probably continue in the future, too. *[43]*

The possible development of computers in the future might be on these lines. The time may come when having a computer will be as common as having a watch. In the future houses may be erected with built-in computers which control everything from paying bills to opening doors and regulating the entry of people. Computers that can function with sensors of different kinds and execute a wide variety of tasks will be a common feature of the times to come. For example, they may control all lights in the house by switching them on and off as people enter or get out of the rooms. They may control heating, air-conditioning, opening windows, etc with the help of electronic signals. Automatic systems *[44]*__________ plants based on humidity sensors and machines that can take messages and reply in human voices using speech synthesizers are among the amazing possibilities in the future. *[45]*

But the main push of the development of computers in the future will probably be in the form of efforts to make them reflect the human capacity to reason. Research is going on to find ways of *[46]*___________ computers with artificial intelligence. Computers in the future would behave intelligently, react to situations and take decisions. They may solve problems the way human experts do, using ***[47] their*** own common sense. Future systems will have a subtle command of natural language in different subjects and provide reliable machine translation between various natural languages. That the new research might make it possible for us to have a conversation with the expert system is a hope for the future. *[48]*

However, the prospect for this future may still be bleak for a long time to come in the under-developed and developing countries of the world. Apart from the fact that not all can afford these intelligent machines of the future, the big question that arises is this: Do we really want such machines? Even with the existing machines there is a lot of concern about the amount of personal information about people held in data banks. Such information in wrong hands could easily be used to discriminate against people. There is also the possibility of interception of computer messages and alteration of the ***[49] information*** passed. The fears of unemployment resulting from the use of computers may prove to be, in the long run, unjustifiable. The computers will still need skilled workers to programme and control them and many jobs will be available in the fields of education, welfare and health care, entertainment, sport and craft. But what must be worrying the minds of people is the possible dehumanising influence of computer technology. There will always be the threat of artificial intelligence denying us our individuality and freedom. Machines may become super-intelligent, overtake human beings and rule the world. **[50]**

(From: ENGLISH FOR ENGINEERS AND TECHNOLOGISTS by Anna University, Madras. Sangham Books, 1990).

POCO

✓ 40.- The opposite of "**few**" is:

a) much — MUCHO — [✓ b) many]   PEQUEÑO c) little   MENOS d) less

x 41.- a) even though SIN EMBARGO   c) whereas MIENTRAS
b) despite + NOUN   d) nevertheless, ...

x 42.- "**were able to**" can be substituted by:
a) could   c) should
b) were capable of   d) had to

43.- According to **paragraph 1**, ***WHICH IS FALSE?***

a) Even though the computers of the past were bigger, more expensive and more difficult to operate, they could perform a lot of instructions in seconds. However, their main disadvantage was that only experts and technical professionals like doctors, teachers, etc. could use them.

b) The computers of the past were less powerful, much more expensive and a lot bigger. They couldn't do as many calculations and needed a computer expert to be able to operate them.

c) If you compare the computers of today with those of the past, you can see that today's computers offer many more advantages because they are not so big or expensive as before. They are much more powerful and anybody can operate them.

d) Today's computers can perform many more calculations and instructions because they are more powerful.

× 44.- a) for to water b) for watering c) by means of watering d) by watering

FOR TO + V,INF

BY + V,ING

45.- **Which is TRUE** according to the **2nd paragraph**?
What will happen in the future?

a) We will have watches that can be controlled by a computer.
b) We will have houses with sensors that will control computers.
c) Our houses will have heating, air-conditioning, a computer and automatic systems.
d) Our houses will be built with computers that will be able to control everything in the house with the help of electronic signals.

× 46.- a) provide b) to provide c) providing d) provided

St + V,ING

47.- **"their"** refers to:

a) human experts
b) problems
c) computers in the future
d) decisions

48.- According to the **3rd paragraph**, what is the main challenge for the future?

a) To make computers use artificial intelligence.
b) To make computers behave like human beings with enough capacity to reason, to react to different situations, and even to talk to the user.
c) To make it possible for computers to have a command of a natural language and translate information from one natural language to another without making mistakes.
d) To make computers solve all kinds of problems in the house.

49.- **"information"** refers to:

a) the use of computers
b) personal information
c) information about unemployment
d) information against people

50.- **WHICH IS TRUE** according to the **4th paragraph**?

a) An important objection raised against the use of computers is that all the personal information which is kept about people in data banks could be intercepted, altered and even used against people.
b) The use of computers will bring unemployment and many of the skilled workers needed to programme and control computers will be lost in the long run.
c) Computer technology will certainly have a negative effect on people because it will make us dehumanised and will be an obstacle for our individuality and freedom.
d) In the future, artificial intelligence will make computers more powerful and superintelligent, so they will be able to control human beings and rule the world.

Resolt.

EXAMEN Nº 1
ASSIGNATURA: ANGLES 1 (TELECOS-INDUST)
IDENTIFICACIO DE LA PROVA: 340 621 00
CURS: 1993-94
CONVOCATORIA: 30 de Juny 94
DURADA DE L'EXAMEN: 2 HORES
PUNTUACIO: 51 respostes correctes d'un total de 74. Les incorrectes no descompten.

I. Choose the right option. Only one is correct.

1) ***Iron*** is pronounced:
a) /əɪən/ [✓ b) /aɪən/] c) /əɪɾən/ d) /aɪɾən/

2) The future tense of *CAN* is:
a) will can b) could [✓ c) will be able to] d) will have to

3) ____________ a new lab soon.
[✓ a) There will be] b) There was c) There must be d) There will have
FUTURE

4) Driving ____________ to become more expensive. GERUND + IMPERATIVE
a) will be able b) will be [✓ c) is going] d) will
PRESENT CONTINUOUS TOBE GOING TO + (PRESENT)

5) Marie and Pierre Curie ____________ radium in the 19th century.
a) have discovered [✓ b) discovered] SIMPLE PAST.
c) will discover d) had discovered

6) They ____________ the information two weeks ago.
[✓ a) tranferred] b) transfered c) have tranferred d) are transferring
SIMPLE PAST

7) Which one is *CORRECT*?
a) Who did design the first diesel engine?
b) Who did he designed the first diesel engine?
c) Who he designed the first diesel engine?
[✓ d) Who designed the first diesel engine?] WHO + VERB + ...
WHAT + SUBJ. + VERB + ...

8) The decimal 0.072 can be read as:
a) oh-point-nought-seven-two
b) oh-point-nought-seventy-two
[✓ c) nought-point-oh-seven-two]
d) nought-point-oh-seventy-two

9) Which one is *WRONG*?
a) This pipe is four metres long
b) This pipe has a lenght of four metres
c) This pipe is four metres in lenght
[✓ d) The lenght of this pipe is ~~in~~ four metres]

UNCOUNTABLE

10) There is ___________ salt in the solution.
[✓ a) too much] b) too many c) not many d) many little
+ UNCOUNTABLE NOUN.

11) Copper is _____________ to flow.
a) enough good for electricity
b) too much good for electricity
[✓ c) good enough for electricity] ADJ + ENOUGH + FOR (NOUN)./VERB
d) too many good for electricity

12) Iron cannot be changed _________ gold
a) from [✓ b) into] c) to d) in
DE, DESDE A, EN A, PARA EN, DENTRO DE

13) There were problems __________ Germany, Britain and France.
a) among [✓ b) between] c) into d) at
ENTRE

14) This test tube is __________ the lab.
a) of b) on [✓ c) from] d) into FROM — SOURCE, ORIGIN
DE EN

15) The plane is 5000 feet __________ sea level.
[✓ a) above] b) on c) over d) below
SOBRE

16) He ran __________ the river.
a) across b) through c) above [✓ d) along]

17) The optical image is reproduced ____________ the screen.
[✓ a) on] b) to c) in d) over
TV

18) Biologists ___________ that there are about two million kinds of organisms alive today.
a) calculated
b) are calculating
[✓ c) have calculated] PRESENT PERFECT.
d) had calculated

PRESENT PERFECT

19) Printed circuit boards have come a long way ___________ the 1950's.
a) from [✓ b) since] c) ago d) for

20) She has __________ done the experiment. PRESENT PERFECT / PRESENT CONTINUOUS
a) still b) yet c) fully [✓ d) already] AUXILIARY + ALREADY + PARTICIPLE

21) They ___________ to install the new computer.
[✓ a) have just started]
b) just started
c) have started just
d) just have started

22) After he __________ all the necessary data, he began to write an article.
a) collected b) was collected c) collect [✓ d) had collected]
PAST PERFECT. + PAST SIMPLE

23) They ___________ a mistake and ____________ it.
a) corrected / had made
b) had corrected / made
[✓ c) had made / corrected] PAST PERFECT / PAST SIMPLE
d) corrected / had had

MAKE MADE MADE

BEFORE
AFTER + V.ING

24) ___________ an experiment, clean the lab.
a) Before to do [✓ b) After doing] c) Do d) Doing

25) To measure temperature in these conditions, a high-sensitivity thermometer ___________.
[✓ a) must be used] c) must ~~to~~ be used
b) is able to be used d) can ~~use~~ BE USED

26) The mains supply must be switched off ___________ electricity at home.
a) when treating with c) in dealing ~~to~~
[✓ b) when dealing with] d) in treating with

WHEN / IN | + V.ING + WITH

27) EXPRESSING METHOD . 113. Pressure can be measured ___________ a barometer. NOUN Which one is ***WRONG***?
a) by means of +NOUN b) by using… BY+V.ING +NOU c) with +NOUN [✓ d) by] + V.ING + NOUN

28) 116 Do not touch the plug with wet hands ___________ you do not get hurt.
a) ~~for~~ b) so as TO +INF c) in order to +INF [✓ d) so that] + CLAUSE

IMPERATIVE + SO THAT + CLAUSE, TO + INF

29) 116 Fit an aerial ___________ obtain INF. better reception. Which one is ***WRONG***?
a) so as to +INF b) to +INF [✓ c) so that] + +CLAUSE d) in order to + INF

30) The end sound for "worked" is:
[✓ a) /t/] b) /id/ c) /d/ d) /ed)

31) "*They say that Local Area Networks are expensive*". Which one is **right and means the same**:
a) It can be said that L.A.N. is ~~not~~ expensive.
[✓ b) L.A.N. can be said to be costly.] CAN BE + P.P.
c) It is said that L.A.N. to be costly.
d) L.A.N. is said that it can be costly.

32) 101 The simultaneous use of analogue and digital transmission techniques ___________ very effective for a wide variety of systems.
a) ~~has~~ known [✓ c) is known to be] TO BE KNOWN | THAT / TO (BE)
b) it is known that ~~is~~ d) ~~has been~~ known that

33) ___________ L.A.N.s seem to be particularly good for the electronic office, they might continue to develop in different forms using transmission media (coaxial cable and /or optical fibres).
a) While c) Despite + NOUN / V.ING
b) However, [✓ d) Although]

34) ___________ small computers may take several steps to carry out a particular operation, a large machine may do the same thing with one instruction.
[✓ a) In spite of the fact that] c) While
b) Despite d) However

35) Lighting circuits can take electric current up to 5A, _____________ power circuits can take current up to 13A.
a) although   [✓ c) whereas]
b) because   d) however

UNCOUNTABLE

36) ___________people came for the exam in September.
[✓ a) Very few]   b) Very many   c) Much more   d) Not as much

37) There were not_______________ last year.
a) as much practicals   [✓ c) so many practicals as]
b) less practicals than   d) so practicals as

38) I don't think this is____________________.
a) the exam most difficult   c) the more difficult exam
b) the exam more difficult   [✓ d) the most difficult exam]

39) He doesn't speak English_________________ my sister.
a) as bad as   c) worst than
[✓ b) so badly as]   d) the worse than

40) ____________defective electrical equipment.
a) You don't touch never   [✓ c) Never touch]
b) Don't touch never   d) Don't never touch

41) Optical fibres carry_______________information than conventional cables.
[✓ a) much more]   c) many less
b) many more   d) much little

II. Decide which of the four answers is the correct one according to the text.

COLOUR TELEVISION SETS.

Model	Price £	Country of Origin	Tube Size cm	Weight Kg
A	323	Japan	47	30
B	299	Japan	45	30
C	385	West Germany	45	23
D	324	United Germany	45	26

Models A and D are [42]_____________ and also [43]__________. They differ in the fact that Model A has [44]___________ tube size and it is also [45]__________. [46]____________ and [47]__________tube size we have Model B which is [48]___________of all. Both A and B are made in the same country, too. But [49]___________ and [50]__________ model with [51]_________ tube size is Model C which unfortunately [52]______________. As you can see from the table, [53]_________________.

42) a) better b) the better c) very well [✓ d) the best]

43) a) the least economical [✓ c) quite economical]
b) the most economical d) very more economical

44) [✓ a) a bigger] b) a less bigger c) a more bigger d) a less big

45) a) lighter b) more heavy [✓ c) heavier] d) more weight

46) [✓ a) With the same weight as A] c) With as weight as A
b) With similar weight as A d) With the same weight than A

47) a) more smaller b) very much small [✓ c) a little small] d) less smaller

48) a) the cheaper [✓ b) the cheapest] c) the most cheap d) the more cheap

49) a) the most good [✓ b) the best] c) the least good d) the better

50) [✓ a) the lightest] b) the more light c) the heaviest d) the most heavy

51) a) the most little b) the least c) the least small [✓ d) the smallest]

52) [✓ a) the least economical] c) the more economical
b) the most economical d) the less economical

53) [✓ a) the cheaper the model, the more it weighs.]
b) the cheapest the model, the most it weighs.
c) the more cheap the model, the less it weighs.
d) the model cheaper, the fewer it weighs.

III. Choose the right tense of the verb for each blank:

A. G. Bell [54]_______________the telephone in 1876 and some years later, the radio [55]_______________ by Marconi. Both advances [56]_____________ essential to men and since then many other [57]_______________ in this field. Actually, the era of electronic communications [58]____________ in 1837 with the use of the telegraph since a signal code [59]_____________ by Morse for that purpose.

54) a) had invented [✓ b) invented] c) was invented d) had been invented

55) [✓ a) was developed] b) has been developed c) developed d) has developed

56) [✓ a) have become] b) became c) become d) will become

57) [✓ a) have been achieved] b) had achieved c) have achieved d) were achieved

58) a) has already begun b) was already begun [✓ c) had already begun] d) was began

59) a) is developed b) had developed c) has been developed [✓ d) was developed]

IV. Read the text and answer these questions:

The modern computer would not exist without the research and inventions of the past. For this reason, one has to become familiar with the evolution of the computer. One of the first devices used by man data was the abacus, a device used to perform calculations ***[60]***________ counters which are made of small beads or stones.

Centuries after the invention of the abacus, during the Scientific Revolution, which began around 1540 and culminated in 1687, scientists invented other computational devices. The Scientific Revolution was an important period because people began to pay more attention to science in general. Firstly, in 1642 Blaise Pascal, a French mathematician, invented the first mechanical calculator. Then, in 1673, Gottfried von Leibnitz, a German mathematician, invented another calculating machine. ***[61]***____________________ understood that machines could help mathematicians and businessmen save time and money. ***[62]***

The Scientific Revolution prepared the way for the great technological advances of the Industrial Revolution. The Industrial Revolution, which started in England after the end of the Scientific Revolution, also brought advances in technology. In 1822, an Englishman named Charles Babbage built a machine that could figure mathematical tables, which he called the analytic engine, using gears and punched cards. He also imagined that the machine might ***[63]***______________ store the results. Nevertheless, the technology during Babbage's lifetime was not sufficiently developed and his dream was never fully realized. ***[64]***

After the Industrial Revolution, ***[65]***________ advances in the development of the computer took place in the United States. The first significant developments were made by Herman Hollerith who in the late 1880s developed a card that had coded data in punched holes. Then he invented machines which could read these data and process them. Later, Howard Aiken of Harvard University combined the mechanical processes of Babbage with the punched cards of Hollerith to develop an electromechanical computer called the Harvard Mark 1, which ***[66]***___________ multiplying and dividing much faster than previously possible. ***[67]***___________, it was limited in speed and capability.

During the Second World War the age of computers began with the development of the first electronic computers. John Mauchly and J. Presper Eckert developed the first fully electronic computer at the University of Pennsylvania. This machine used electron tubes to make and store its calculations. These early computers using vacuum tubes and magnetic tapes are known as the first generation of computers. But what marked the beginning of the modern age of computers was the development of the transistor. ***[68]***

The second generation of computers using transistors began in 1959. These computers used magnetic disks, were smaller, faster and more reliable than first generation computers. ***[69] They*** also generated less heat, cost less money, and used less power. Users programmed second generation computers with high-level programming languages like FORTRAN.

The third generation of computers began around 1965 when integrated circuits (ICs) started to be used to increase capability and decrease size. Computer companies ***[70]***____________ integrated circuits since 1965. Because microchips are so small, third generation computers totally electronic greatly increased their speed and the capacity of the internal memory, and reduced ***[71] its*** cost and complexity. Their external memory continued to use magnetic disks, which became larger and faster.

Some people call the large computers we use today the fourth generation of computers, because they are much smaller and much more powerful than those used in the 1960s. These machines still use integrated circuits, but these circuits are the product of Large Scale Integration (LSI) and Very Large Scale Integration (VLSI). This kind of technology has reduced the size of the computer so much that many people feel that computer industry has undergone another revolution, making the small personal computer very common. ***[72]*** ***[73]*** ***[74]***

60) How could the abacus perform calculations?
a) in moving
b) when moving
[✓ c) by moving]
d) to move

61) a) Both Pascal or Leibnitz
b) Either Pascal nor Leibnitz
c) Neither Pascal and Leibnitz
[✓ d) Both Pascal and Leibnitz]

62) According to the first two paragraphs, which is ***FALSE***?
[✓ a) The abacus was invented during the Scientific Revolution.]
b) The period called the Scientific Revolution was very important because people started to be more interested in science.
c) During the Scientific Revolution two important mathematicians contributed to the creation of the first calculating machines.
d) Pascal and Leibnitz were two Europeans that saw that these early machines could save time and money.

63) a) can b) could [✓ c) be able to] d) can to

64) According to the 3rd paragraph, which is ***FALSE***?
a) Even though the Scientific Revolution started the development of the first calculating machines, during the Industrial Revolution other machines that later would affect the development of computers were invented. !!!
BY + V.ING + NOUN → b) By the beginning of the nineteenth century Babbage invented the analytic engine, which is considered as an important advance in technology.
c) Babbage's machine was neither completed nor put into use because technology was not developed enough. !!!
[✓ d) In spite of the fact that technology was not very developed in the 1800s, Babbage's dream came true at that time.]

65) [✓ a) most] b) most of c) the most d) the more

66) a) could [✓ b) was capable of] c) was able to d) had to

67) [✓ a) However] b) Even though c) While d) Although

68) According to the 4th and 5th paragraph, which is ***TRUE***?
a) The Industrial Revolution started in the United States.
[✓ b) Harvard Mark 1 is known to be the first electromechanical computer which resulted from a combination of the ideas of both Babbage and Hollerith.]
c) The first fully electronic computer created at the University of Pennsylvania could make and store its calculations and also started to use transistors.
d) The first generation of computers started with the development of the transistor during the Second World War.

69) "*They*" (line 34) refers to:
a) transistors
[✓ b) second generation computers]
c) magnetic disks
d) first generation computers

70) [✓ a)] have been using
b) used
c) have been used
d) were used

71) "*its*" (line 41) refers to:
a) microchips
b) integrated circuits
[✓ c)] third generation computers
d) internal memory

72) According to the last three paragraphs, which is ***FALSE***?

a) The second generation of computers, the beginning of the modern age of computers, started with the development of the transistor.

b) The third generation of computers started when integrated circuits began to be used.

c) The invention of microchips offered two advantages. First, they could make computers much faster and with a higher capacity for memory. Second, they made computers less complex and cheaper than previously.

[✓ d)] The fourth generation of computers has gone through another technological revolution which has made integrated circuits obsolete. They now use LSI and VLSI.

73) According to the text, which is ***FALSE***?

a) The first generation of computers used magnetic tapes whereas the second and the third generation started to use magnetic disks to store information in the external memory.

[✓ b)] It is known that the real advance that started the modern age of computers was the use of vacuum tubes and magnetic tapes.

c) What makes those early machines of Babbage, Hollerith and Aiken different in comparison with the machine created at the University of Pennsylvania is that the former machines were mechanical and electromechanical while the first generation of computers was fully electronic.

d) Although the use of transistors in computers was a significant technological advance in the 1950s, the use of integrated circuits made computers much faster and smaller than before.

74) Which of these could be the title of the text:

a) The inventions of the past.
b) The age of computers.
c) The scientific revolutions.
[✓ d)] History of computers.

VOCABULARY

PART I.-

19.-	printed circuit boards:	placa o tablero de circuitos impresos
28.-	plug:	enchufe
34.-	steps:	pasos, avances
37.-	practicals:	prácticas (de laboratorio, etc)

PART II.- COLOUR TELEVISION SETS

tube size:	tamaño del tubo
unfortunately:	desgraciadamente

PART III.- A. G. BELL

signal code:	código de señales

PART IV.- long text

Line 4	beads:	bolitas
Line 7	pay attention:	prestar atención
Line 16	gears:	palancas
	punched cards:	tarjetas perforadas
Line 21	punched holes:	agujeros perforados en la tarjeta
Line 30	vacuum:	vacío
Line 34	reliable:	fiable
Line 47	undergo:	sufrir

2. Td.
Indel).
Ex. Resolt
Anglès I